

## ABSTRACT:

In a transmission system a signal to be transmitted is applied to a source encoder (4) for being encoded. The encoded signal is applied to a channel encoder (6) which applies an error correcting code on the encoded input signal. The output signal of the channel encoder (6) is transmitted to a receiver (14) which processes the received signal by means of a channel decoder (18) and a source decoder (20).

The source encoder comprises a codebook entry selector (42) which selects a ternary number generated by a ternary generator (26), such that a synthetic signal derived from said ternary number is a best approximation of a signal to be encoded. The ternary value found in this way is converted into a binary number in such a way that the ternary values corresponding to binary numbers which differ only in one particular digit, differ only in one single digit. This has the advantage that a transmission error of in said particular digit has a small perceptual effect, because the corresponding ternary number differ only slightly.

In a preferred embodiment the numerical value of a first codebook entry corresponds to an index of a second codebook entry, and the numerical value of the second codebook entry corresponds to the index of the first codebook entry.